

Important Instructions:

- 1) Open this MS-Word document and start writing answers below each respective question given on page 2.**
- 2) Answers the question in the same sequence in which they appear.**
- 3) Provide to the point and concrete answers.**
- 4) First read the questions and understand what is required of you before writing the answer.**
- 5) Attempt the paper yourself and do not copy from your friends or the Internet. Students with exactly similar answers or copy paste from the Internet will not get any marks for their assignment.**
- 6) You can contact me for help if you have any doubt in the above instructions or the assignment questions.**
- 7) All questions must be attempted.**
- 8) Do not forget to write your name, university ID, class and section information.**
- 9) Rename you answer file with your university ID# before uploading to SIC.**
- 10) When you are finished with writing your answers and are ready to submit your answer, convert it to PDF and**

upload it to SIC unzipped, before the deadline mentioned on SIC.

Mid Semester Assignment, Course: - Mobile Computing

Deadline: - Mentioned on SIC

Marks: - 30

**Program: - BS (CS), BS-SE
2020**

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Class and Section: _Bs.SE (Section B 8th semester)

Question1: Explain why wired networks have higher bandwidth in comparison to mobile networks.

(2)

Answer 1: Wireless network is generally much slower than the wired network .

The wired network is faster because a cable is used to connect each device to the network with each cable transmitting data at same speed . IT is also faster because it never weighed down by unnecessary or unexpected traffic .

Question2: Explain the relation between miniaturization and portability.

(3)

Answer 2: The relation b/w miniaturization and portability is , As we miniaturize our devices the portability of devices become very easy for example ; computer miniaturized into laptops which is portable

Miniaturization ;

Refers to the evolution of electronic devices as they be come much smaller and much faster .

Portability;

Refers to whether the device can be moved from one location to another .

Question3: Differentiate between convergence and divergence.

(3)

Answer 3: the difference b/w convergence and divergence are ,

Disvergence generally means moving apart ,

Convergence means coming together.

Convergence integrating types of digital mobile devices such as PDAs , mobile phones , games , cameras etc into hybrid devices.

- **Divergence** Opposite approach to interaction design by promoting information appliances with specialized functionality rather than generalized ones .

Question4: Suppose you are given the task of designing an app for mobile devices which has the capabilities of text chat, recorded audio message, and live video conferencing. Explain which protocol out of UDP and TCP would you use for each type of service and why?

(4)

Answer 4 : We will use session initiation protocol (SIP) out of UDP and TCP because it transmit real time session like video call , text , audio message b/w two end points .

This protocol add internet telephone feature to our application it integrated call management services that set up outgoing and incoming video calls and instant messaging is example of SIP protocol .

Question5: Suppose you have the choice of using 2G, 3G, 4G, 5G, Wi-Fi and Satellite networks. Which of these technologies will you use in the following scenarios and why.

(18)

- a) A city wide network with voice, SMS services and Internet services good enough for ultra-high definition streaming and video conferencing.**
- b) A city wide network with only voice and SMS services.**
- c) A city wide network with voice, SMS services and Internet services good enough for normal definition streaming and video conferencing.**
- d) A global scale network with voice, SMS and Internet services.**
- e) A campus size network for information and resource sharing between 200 end devices.**
- f) A city wide network with voice, SMS and basic Internet services.**

Answer 5 : A) We will use in this case 5G , the frequency of this network will be 24 to 86 GHz and data rate will be 1gbps to unlimited that is for the mention services .

B) In this case we will use 2GB . frequency of this network is 1.8GHz approximately which is able for voice and sms services .

C) 4gb will be used in this case , 2 to 8 GHz is the frequency of this network and 100 mbs to 1GB is the data rate which is for the mention services .

D) Satellite will be used in this case through which we can access remote and may be global users .

E) In this case we use wifi which will be connected with each device through wire .

F) 3G will be used in this case, frequency is 1.6 to 2.0 GHz of this network and 144kps to 2mbps is the data rate which will be able for sms voice and internet services .